



UNITED STATES PATENT AND TRADEMARK OFFICE

②

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/816,004 | 03/22/2001 | Masakazu Suzuki | SCEI 3.0-054 | 5183 |

530 7590 09/08/2006

LERNER, DAVID, LITTENBERG,
KRUMHOLZ & MENTLIK
600 SOUTH AVENUE WEST
WESTFIELD, NJ 07090

EXAMINER

MANIWANG, JOSEPH R

ART UNIT PAPER NUMBER

2144

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|---------------------------------------|--|
| Office Action Summary | Application No. 09/816,004 | Applicant(s) SUZUOKI ET AL. | |
| | Examiner Joseph R. Maniawang | Art Unit 2144 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,10-18,20-46,48-55 and 57-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-45 is/are allowed.
- 6) ☒ Claim(s) 1-3,5-8,10-18,20-27,46,48-55 and 57-63 is/are rejected.
- 7) ☐ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/23/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 101

2. Claims 8-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. "A computer readable medium for storing a software cell for transmission over a computer network, said computer network comprising a plurality of processors, said software cell comprising: a program...; data...; and a global identification..." is non-statutory, as the claimed limitations appear to be a mere arrangement of data which impart no functionality when employed as a computer component, and are therefore non-functional descriptive material and lack the requisite functionality to satisfy the practical application requirement. Additionally, "A computer readable medium" would normally be considered statutory unless the specification defines "computer readable medium" as including intangible media such as signals, carrier waves, transmissions, optical waves, transmission media or other media incapable of being touched or perceived absent the tangible medium through which they are conveyed. In this case, the Specification does not define "computer readable media" and can therefore be reasonably interpreted by one of ordinary skill in the art as an intangible media and non-statutory.

Claim Rejections - 35 USC § 102

3. Claims 1-3, 5-8, 10-18, 20-27, 46, 48-55, and 57-63 are rejected under 35 U.S.C. 102(e) as being anticipated by Breslau et al. (U.S. Pat. No. 6,421,736), hereinafter referred to as Breslau.

4. Regarding claim 1, Breslau disclosed a method and system comprising a plurality of processors connected to said network, each of said processors comprising a plurality of first processing units having the same instruction set architecture and a second processing unit for controlling said first processing units (see column 4, line 35 through column 5, line 20), said first processing units being operable to process software cells comprising a program compatible with said instruction set architecture (see column 1, lines 35-40), data associated with said program (see column 1, lines 42-50), information for routing said software cell over said network (see column asdf), and an identification number uniquely identifying said software cell among all of said software cells being transmitted over said network (see column 1, lines 61-66; column 2, lines 38-48).

5. Regarding claim 2, Breslau disclosed the method and system wherein said second processing unit controls said first processing units by determining the programs of said software cells processed by said first processing units (see column 6, lines 4-20).

6. Regarding claim 3, Breslau disclosed the method and system wherein each said first processing unit includes a local memory exclusively associated with said first

Art Unit: 2144

processing unit and said first processing unit processes said programs from said local memory (see column 4, lines 35-57).

7. Regarding claim 5, Breslau disclosed the method and system wherein said first processing units comprise means for using said associated memory spaces to synchronize said first processing units' reading of data from, and writing of data to, said blocks (see column 4, lines 35-57).

8. Regarding claim 6, Breslau disclosed the method and system wherein each of said processors further comprises a direct memory access controller (see column 4, lines 35-57).

9. Regarding claim 7, Breslau disclosed the method and system wherein each said first processing unit is operable to issue a synchronize read command to read data from said main memory to a local memory associated with said first processing unit and to issue a synchronize write command to write data from said local memory to said main memory (see column 5, line 53 through column 6, line 20).

10. Regarding claims 8 and 18, Breslau disclosed a method and system comprising a computer network comprising a plurality of processors (see column 4, line 35 through column 5, line 20); and a plurality of software cells configured for transmission over the computer network, each of the software cells comprising a program for processing by one or more of said processors (see column 1, lines 35-40); data associated with said programs (see column 1, lines 42-50); information for routing said software cell over said network (see column asdf); and a global identification uniquely identifying said

Art Unit: 2144

software cell among all software cells being transmitted over said network (see column 1, lines 61-66; column 2, lines 38-48).

11. Regarding claims 9 and 19, Breslau disclosed the method and system wherein each said software cell further comprises information for routing said software cell over said network (see column 6, lines 4-20; column 8, lines 4-20).

12. Regarding claims 10 and 20, Breslau disclosed the method and system wherein said information includes an identification for one of said plurality of processors, said one processor being the processor to which said software cell is to be transmitted for processing (see column 6, lines 4-20; column 8, lines 4-20).

13. Regarding claims 11 and 21, Breslau disclosed the method and system wherein said identification includes an internet protocol address (see column 5, lines 1-9).

14. Regarding claims 12 and 22, Breslau disclosed the method and system wherein said information includes an identification for one of said plurality of processors, said one processor being the processor from which said software cell originates (see column 8, lines 15-54).

15. Regarding claims 13 and 23, Breslau disclosed the method and system wherein said information includes an identification for one of said plurality of processors, said one processor being the processor to which information regarding the processing of said software cell is to be transmitted (see column 8, lines 15-54).

16. Regarding claims 14 and 24, Breslau disclosed the method and system wherein each said software cell further comprises information providing a plurality of direct memory access commands for one of said processors (see column 1, lines 41-50).

Art Unit: 2144

17. Regarding claims 15 and 25, Breslau disclosed the method and system wherein said information comprises a virtual identification for said one processor and addresses of a memory associated with said one processor for implementing said direct memory access commands (see column 8, lines 35-54).

18. Regarding claims 16 and 26, Breslau disclosed the method and system wherein said global identification is based upon the identity of one of said processors, said one processor being a processor creating said software cell, and upon the time and date of said creating (see column 8, lines 15-20).

19. Regarding claims 17 and 27, Breslau disclosed the method and system wherein said global identification is based upon the identity of one of said processors, said one processor being a processor transmitting said software cell, and upon the time and date of said transmitting (see column 8, lines 15-20).

20. Regarding claims 46 and 55, Breslau disclosed a method and system comprising at least one processor configured for receiving and processing software cells transmitted over a computer network (see column 4, lines 58-67); each of the software cells comprising a program for processing by said at least one processor (see column 1, lines 35-40); data associated with said program (see column 1, lines 41-50); information for routing said software cell over the computer network (see column asdf); and a global identification uniquely identifying said software cells among all software cells being transmitted over the network (see column 1, lines 61-66).

Art Unit: 2144

21. Regarding claims 47 and 56, Breslau disclosed the method and system wherein each said software cell further comprises information for routing said software cell over the computer network (see column 8, lines 15-54).

22. Regarding claims 48 and 57, Breslau disclosed the method and system wherein said information includes an identification for said at least one processor, said at least one processor being the processor to which said software cell is to be transmitted for processing (see column 8, lines 15-54).

23. Regarding claims 49 and 58, Breslau disclosed the method and system wherein said identification includes an internet protocol address (see column 5, lines 1-9).

24. Regarding claims 50 and 59, Breslau disclosed the method and system wherein said information includes an identification for said at least one processor, said at least one processor being the processor from which said software cell originates (see column 8, lines 15-34).

25. Regarding claims 51 and 60, Breslau disclosed the method and system wherein said information includes an identification for said at least one processor, said at least one processor being the processor to which information regarding the processing of said software cell is to be transmitted (see column 8, lines 15-34).

26. Regarding claims 52 and 61, Breslau disclosed the method and system wherein each said software cell further comprises information providing a plurality of direct memory access commands for said at least one processor (see column 1, lines 41-50).

27. Regarding claims 53 and 62, Breslau disclosed the method and system wherein said information comprises a virtual identification for said at least one processor and

Art Unit: 2144

addresses of a memory associated with said at least one processor for implementing said direct memory access commands (see column 8, lines 15-34).

28. Regarding claims 54 and 63, Breslau disclosed the method and system wherein said global identification is based upon the identity of said at least one processor, said at least one processor being a processor creating said software cell, and upon the time and date of said creating (see column 8, lines 15-34).

Claim Objections

29. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

30. Claims 28-45 allowed.

31. The following is an examiner's statement of reasons for allowance:

32. The closest prior art, Breslau et al. (U.S. Pat. No. 6,421,736), does not teach the combination of limitations in independent claim 28. For example, Breslau does not teach directing with a second processing unit any one of a plurality of first processing units to process a program, when the second processing unit and the plurality of first processing units are part of a computer processor, directing with said second processing unit said memory controller to transfer said one program and data associated with said one program from said main memory to the local memory

Art Unit: 2144

exclusively associated with said one first processing unit, instructing with said second processing unit said one first processing unit to initiate processing of said one program from said one first processing unit's local memory, and processing with said one first processing unit said one program and said data associated with said one program from said local memory exclusively associated with said one first processing unit. The dependent claims of this claim are also allowable.

33. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

34. Applicant's arguments filed 06/05/06 have been fully considered but they are not persuasive.

35. Regarding claims 8-17 rejected under 35 U.S.C. 101 as being drawn to non-statutory subject matter, Applicant argues against the assertion that the claimed invention "is non-statutory, since it is not tangibly embodied in a manner so as to be executable, as the only hardware is an intended use statement." Examiner submits that this reasoning was not relied upon the previous Office Action. Instead, claims 8-17 were rejected and remain presently rejected for being directed to non-functional descriptive material and being embodied on an intangible medium as detailed above.

Art Unit: 2144

36. Regarding claim 1 rejected under 35 U.S.C. 102(e) as being anticipated by Breslau et al. (U.S. Pat. No. 6,421,736), Applicant asserts that the reference does not teach "each of said processors comprising a plurality of first processing units having the same instruction set architecture and a second processing unit for controlling said first processing units." Examiner submits that such a feature as broadly claimed was taught by Breslau, where it was disclosed that a computer system ("processor") comprised memory, an I/O facility, graphical display, etc. ("first processing units"), and a CPU ("second processing unit") for controlling said first processing units as claimed (see column 4, line 35 through column 5, line 20). Applicant further asserts that Breslau does not teach each software cell comprises a program or an ID number that uniquely identifies the software cell. Examiner submits that Breslau clearly teaches such features. Breslau disclosed that each object ("software cell") comprised "a predefined set of operations" and "programmed tasks for the object to perform when called upon to do so" ("program") and was also "identified with a unique name" ("ID") (see column 1, lines 35-50, 61-66). Applicant further asserts that Breslau does not teach that the software cell includes information for routing the software cell over the network. Examiner submits that such a concept was clearly disclosed by Breslau. Routing of objects was clearly possible in the disclosure of Breslau, such routing being based on the identity of the object (see column 8, lines 4-54). As described above, each object comprised a unique ID, and as such, routing based on such an identity clearly teaches that the software cell included information for routing the cell over the network as broadly claimed. As Applicant relies upon a similar argument for the remainder of

Art Unit: 2144

independent claims 8, 18, 46, and 55, Examiner relies upon the reasoning above in rejecting these claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

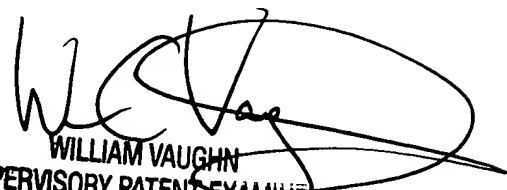
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph R. Maniwang whose telephone number is (571) 272-3928. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2144

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM


WILLIAM VAUGHN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100